

Applicants : Hans-Gerd Spoeler
For : CURVED ASSEMBLY LINE AND/OR CONVEYOR BELT
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In the Specification:

Applicants wish to amend the specification as follows:

Please insert the following heading before the first paragraph on page 1:

BACKGROUND OF THE INVENTION

The invention relates to a curved assembly line and/or conveyor belt, in particular for the assembly and transport of motor vehicles or motor vehicle parts in production, which is formed by carrying elements which are mounted in an articulated manner with respect to one another and engage positively one into the other and which have in each case an upper platform and a lower carrying frame and the end faces of which are convexly and concavely curved in the form of an arc of a circle with approximately identical radii of curvature, so that in each case a convex and a concave recess of two adjacent carrying elements form, bearing positively one against the other, a continuous conveyor belt transition both in curved sections and on a straight line.

Please insert the following heading on page 3, before paragraph 2:

SUMMARY OF THE INVENTION

The object of the present invention is to provide a curved assembly line and/or conveyor belt of the generic type, which, along with a simple movement sequence and low outlay in control terms, makes it possible, by virtue of its design, to have an essentially tangential orientation of the platforms in the arc region, so that, on account of narrow stationary covers of the assembly line and/or conveyor belt, a larger useful area is available on the platform in the curved region.

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Please replace paragraph 5, beginning on page 4 and ending on page 5, with the following amended paragraph:

~~Preferably, according to the invention, a~~ A multiplicity of carrying elements ~~are~~may be joined together via connecting members into a closed or open composite platform structure. A closed composite platform structure leads to a carousel-like rotation of the carrying elements on a path closed on itself.

Please replace the first full paragraph on page 5 with the following amended paragraph:

~~In a preferred refinement of the invention, the~~ The connecting members of the carrying elements ~~are~~may be coupling rods, in each case two adjacent carrying elements separated by a common intermediate piece and having convex end faces being connected to one another in an articulated manner by means of a common coupling rod, in such a way that the two articulation points of each coupling rod lie in each case on the radius center points of those end faces of the carrying elements which are curved concavely in the form of an arc of a circle.

Please replace the third full paragraph on page 5 with the following amended paragraph:

~~According to the invention, roller~~ Roller guides or sliding guides, which allow a friction-free or low-friction displacement of the adjacent carrying elements with respect to one another, ~~are~~may be provided on the end face in those regions of the carrying elements which face one another.

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Please replace paragraph 5, beginning on page 7 and ending on page 8, with the following amended paragraph:

~~According to a particularly beneficial feature of the invention, vertical~~ Vertical load transmission ~~takes~~may take place via co-moving steel rollers on the underside of the carrying elements, ~~preferably all~~such as with the carrying rollers being mounted rotatably about their vertical axes. In the case of a low rolling resistance of the metallic carrying rollers, a low-slung type of construction requiring no pit is obtained. The platform itself is advantageously formed by a plywood layer which can be walked on by persons and, for vehicle removal, can be driven on.

Please replace the first full paragraph on page 8 with the following amended paragraph:

The invention has a multiplicity of advantages which ~~are collated as follows~~include:
The invention is simple in construction and has high functional reliability. Owing to the tangential orientation of the carrying elements in the curves, narrow covers can be implemented, which allow a large interspacing even in the arc. This makes it easier to install lifting devices controlled by slotted link, active lifting tables, suction-extraction systems, etc. The carrying elements together with the platforms can be operated in a closed or open composite structure. The drive takes place via stationary roller batteries or via co-moving individual drives. No intermediate covers are required between the platforms of the carrying elements. The orientation of the platforms with respect to the direction of travel is always maintained, and there is no need for any corner transfer. The movement sequence is simple and requires only a low outlay in control terms. Since all the platforms are mechanically connected fixedly to one another, there is no risk that, for example due to a malfunction of the control, a gap between two adjacent platforms occurs, which could lead to persons being put at risk. The uniform drives make a closed contact line for energy and data transmission possible.

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Please insert the following heading before the second full paragraph on page 9:

BRIEF DESCRIPTION OF THE DRAWINGS

An exemplary embodiment of the invention is illustrated in the drawing and is described below. In the drawing:

Please insert the following heading before the eighth full paragraph beginning on page 9 and ending on page 10:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The drawing figure 2 illustrates, roughly diagrammatically, an assembly line and/or conveyor belt 1, such as is known and described in the prior art. The assembly line and/or conveyor belt is used in the automobile industry for the assembly and transport of motor vehicles and consists of carrying elements 2 which are mounted in an articulated manner with respect to one another and engage positively one into the other and which are guided on an endless conveying section. The individual carrying elements 2 are in each case designed convexly on their end faces 4 leading in the conveying direction 3 and concavely on their opposite end faces 5, so that, when the carrying elements 2 rotate, the leading end faces 4 of the one carrying element 2 engage positively in the trailing end faces 5 of the carrying element 2 adjacent to the conveying direction 3, in such a way that a continuous transition between the adjacent carrying elements 2 is afforded both in the curved region and on the straight conveying section. As can be seen in figure 2, the carrying elements 2 move around the curve in a polygonal progression, the carrying elements 2 coupled to one another moving, in regions, laterally out of the curved profile which resembles an arc of a circle.